

04CO 04-18-01
#2
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RAW SEQUENCE LISTING

DATE: 04/05/2001

PATENT APPLICATION: US/09/812,471

TIME: 12:24:05

Input Set : A:\00742.062002.SEQLIST.TXT

Output Set: N:\CRF3\04052001\I812471.raw

4 <110> APPLICANT: Benjamin, Thomas L.
7 <120> TITLE OF INVENTION: Diagnosing and Treating Cancer Cells
8 Using Mutant Viruses
10 <130> FILE REFERENCE: 00742/062002
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/812,471
C--> 12 <141> CURRENT FILING DATE: 2001-03-19
12 <150> PRIOR APPLICATION NUMBER: US 60/216,723
13 <151> PRIOR FILING DATE: 2000-07-07
15 <160> NUMBER OF SEQ ID NOS: 21
17 <170> SOFTWARE: FastSEQ for Windows Version 4.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 1005
21 <212> TYPE: PRT
22 <213> ORGANISM: Homo Sapiens
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28 20 25 30
29 Val Cys Ala Lys Cys Cys Ala Gln Phe Thr Asp Pro Thr Glu Phe Leu
30 35 40 45
31 Ala His Gln Asn Ala Cys Ser Thr Asp Pro Pro Val Met Val Ile Ile
32 50 55 60
33 Gly Gly Gln Glu Asn Pro Asn Asn Ser Ser Ala Ser Ser Glu Pro Arg
34 65 70 75 80
35 Pro Glu Gly His Asn Asn Pro Gln Val Met Asp Thr Glu His Ser Asn
36 85 90 95
37 Pro Pro Asp Ser Gly Ser Ser Val Pro Thr Asp Pro Thr Trp Gly Pro
38 100 105 110
39 Glu Arg Arg Gly Glu Glu Ser Ser Gly His Phe Leu Val Ala Ala Thr
40 115 120 125
41 Gly Thr Ala Ala Gly Gly Gly Gly Gly Leu Ile Leu Ala Ser Pro Lys
42 130 135 140
43 Leu Gly Ala Thr Pro Leu Pro Pro Glu Ser Thr Pro Ala Pro Pro Pro
44 145 150 155 160
45 Pro Pro Pro Pro Pro Pro Pro Gly Val Gly Ser Gly His Leu Asn
46 165 170 175
47 Ile Pro Leu Ile Leu Glu Glu Leu Arg Val Leu Gln Gln Arg Gln Ile
48 180 185 190
49 His Gln Met Gln Met Thr Glu Gln Ile Cys Arg Gln Val Leu Leu Leu
50 195 200 205
51 Gly Ser Leu Gly Gln Thr Val Gly Ala Pro Ala Ser Pro Ser Glu Leu
52 210 215 220
53 Pro Gly Thr Gly Thr Ala Ser Ser Thr Lys Pro Leu Leu Pro Leu Phe
54 225 230 235 240
55 Ser Pro Ile Lys Pro Val Gln Thr Ser Lys Thr Leu Ala Ser Ser Ser
56 245 250 255

ENTERED

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59 Phe His Leu Tyr His Pro Leu Gly Ser Gln His Pro Phe Ser Ala Gly
60                275                280                285
61 Gly Val Gly Arg Ser His Lys Pro Thr Pro Ala Pro Ser Pro Ala Leu
62                290                295                300
63 Pro Gly Ser Thr Asp Gln Leu Ile Ala Ser Pro His Leu Ala Phe Pro
64 305                310                315                320
65 Ser Thr Thr Gly Leu Leu Ala Ala Gln Cys Leu Gly Ala Ala Arg Gly
66                325                330                335
67 Leu Glu Ala Thr Ala Ser Pro Gly Leu Leu Lys Pro Lys Asn Gly Ser
68                340                345                350
69 Gly Glu Leu Ser Tyr Gly Glu Val Met Gly Pro Leu Glu Lys Pro Gly
70                355                360                365
71 Gly Arg His Lys Cys Arg Phe Cys Ala Lys Val Phe Gly Ser Asp Ser
72                370                375                380
73 Ala Leu Gln Ile His Leu Arg Ser His Thr Gly Glu Arg Pro Tyr Lys
74 385                390                395                400
75 Cys Asn Val Cys Gly Asn Arg Phe Thr Thr Arg Gly Asn Leu Lys Val
76                405                410                415
77 His Phe His Arg His Arg Glu Lys Tyr Pro His Val Gln Met Asn Pro
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79 His Pro Val Pro Glu His Leu Asp Tyr Val Ile Thr Ser Ser Gly Leu
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81 Pro Tyr Gly Met Ser Val Pro Pro Glu Lys Ala Glu Glu Glu Ala Ala
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83 Thr Pro Gly Gly Gly Val Glu Arg Lys Pro Leu Val Ala Ser Thr Thr
84 465                470                475                480
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86                485                490                495
87 Thr Ala Thr Ala Pro Gly Leu Pro Ala Phe Asn Lys Phe Val Leu Met
88                500                505                510
89 Lys Ala Val Glu Pro Lys Asn Lys Ala Asp Glu Asn Thr Pro Pro Gly
90                515                520                525
91 Ser Glu Gly Ser Ala Ile Ser Gly Val Ala Glu Ser Ser Thr Ala Thr
92                530                535                540
93 Leu Met Gln Leu Ser Lys Leu Met Thr Ser Leu Pro Ser Trp Ala Leu
94 545                550                555                560
95 Leu Thr Asn His Phe Lys Ser Thr Gly Ser Phe Pro Leu Pro Leu Cys
96                565                570                575
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98                580                585                590
99 Leu Val Glu Lys Ile Asp Arg Gln Gly Ala Val Ala Val Thr Ser Ala
100                595                600                605
101 Ala Ser Gly Ala Pro Thr Thr Ser Ala Pro Ala Pro Ser Ser Ser Ala
102                610                615                620
103 Ser Ser Gly Pro Asn Gln Cys Val Ile Cys Leu Arg Val Leu Ser Cys
104 625                630                635                640
105 Pro Arg Ala Leu Arg Leu His Tyr Gly Gln His Gly Gly Glu Arg Pro
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108          660          665          670
109 Arg Ala His Phe Val Gly His Lys Ala Ser Pro Ala Ala Arg Ala Gln
110          675          680          685
111 Asn Ser Cys Pro Ile Cys Gln Lys Lys Phe Thr Asn Ala Val Thr Leu
112          690          695          700
113 Gln Gln His Val Arg Met His Leu Gly Gly Gln Ile Pro Asn Gly Gly
114 705          710          715          720
115 Thr Ala Leu Pro Glu Gly Gly Gly Ala Ala Gln Glu Asn Gly Ser Glu
116          725          730          735
117 Gln Ser Thr Val Ser Gly Ala Gly Ser Phe Pro Gln Gln Gln Ser Gln
118          740          745          750
119 Gln Pro Ser Pro Glu Glu Glu Leu Ser Glu Glu Glu Glu Glu Asp
120          755          760          765
121 Glu Glu Glu Glu Asp Val Thr Asp Glu Asp Ser Leu Ala Gly Arg
122          770          775          780
123 Gly Ser Glu Ser Gly Gly Glu Lys Ala Ile Ser Val Arg Gly Asp Ser
124 785          790          795          800
125 Glu Glu Ala Ser Gly Ala Glu Glu Glu Val Gly Thr Val Ala Ala Ala
126          805          810          815
127 Ala Thr Ala Gly Lys Glu Met Asp Ser Asn Glu Lys Thr Thr Gln Gln
128          820          825          830
129 Ser Ser Leu Pro Pro Pro Pro Pro Pro Asp Ser Leu Asp Gln Pro Gln
130          835          840          845
131 Pro Met Glu Gln Gly Ser Ser Gly Val Leu Gly Gly Lys Glu Glu Gly
132          850          855          860
133 Gly Lys Pro Glu Arg Ser Ser Ser Pro Ala Ser Ala Leu Thr Pro Glu
134 865          870          875          880
135 Gly Glu Ala Thr Ser Val Thr Leu Val Glu Glu Leu Ser Leu Gln Glu
136          885          890          895
137 Ala Met Arg Lys Glu Pro Gly Glu Ser Ser Ser Arg Lys Ala Cys Glu
138          900          905          910
139 Val Cys Gly Gln Ala Phe Pro Ser Gln Ala Ala Leu Glu Glu His Gln
140          915          920          925
141 Lys Thr His Pro Lys Glu Gly Pro Leu Phe Thr Cys Val Phe Cys Arg
142          930          935          940
143 Gln Gly Phe Leu Glu Arg Ala Thr Leu Lys Lys His Met Leu Leu Ala
144 945          950          955          960
145 His His Gln Val Gln Pro Phe Ala Pro His Gly Pro Gln Asn Ile Ala
146          965          970          975
147 Ala Leu Ser Leu Val Pro Gly Cys Ser Pro Ser Ile Thr Ser Thr Gly
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150          995          1000          1005
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154 <211> LENGTH: 16080
155 <212> TYPE: DNA
156 <213> ORGANISM: Homo sapiens
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158 <400> SEQUENCE: 2

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161 tactaggtta ggaagctctg gagcctacag cttgaggaga agccatcggt caagtcagtc 180
162 aatagcaaaa cctcactctt ctccctctca gaactcctgt tccaaatgat cctatgttaa 240
163 gagtaataac tacaactcat tacaagacgg agaggcaggg aggacgccac ctggagctgg 300
164 gactcttaag aaccagacaa tgacaaagac acaagcccca gcctacggat aggcaaaatg 360
165 ggtaggggtc ttgaaagagg aagataagga aaatacaagg ggccagggaa taaaggaggg 420
166 agttatctaa aactagaagc atactagtgc taggaaatcc cccatgatcc ctggtacacc 480
167 tctgcacact atgtcactat tagcccaaaa gaattattaac gagaatgtcc acattcaca 540
168 gaatttgagg ccttttccct tacatcatgt ccttttctta gtcacatagg taccagcaag 600
169 cctatgttc tagcaacatt ccttaactct ctcatcatta gtcatcaac catgctgacc 660
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L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date